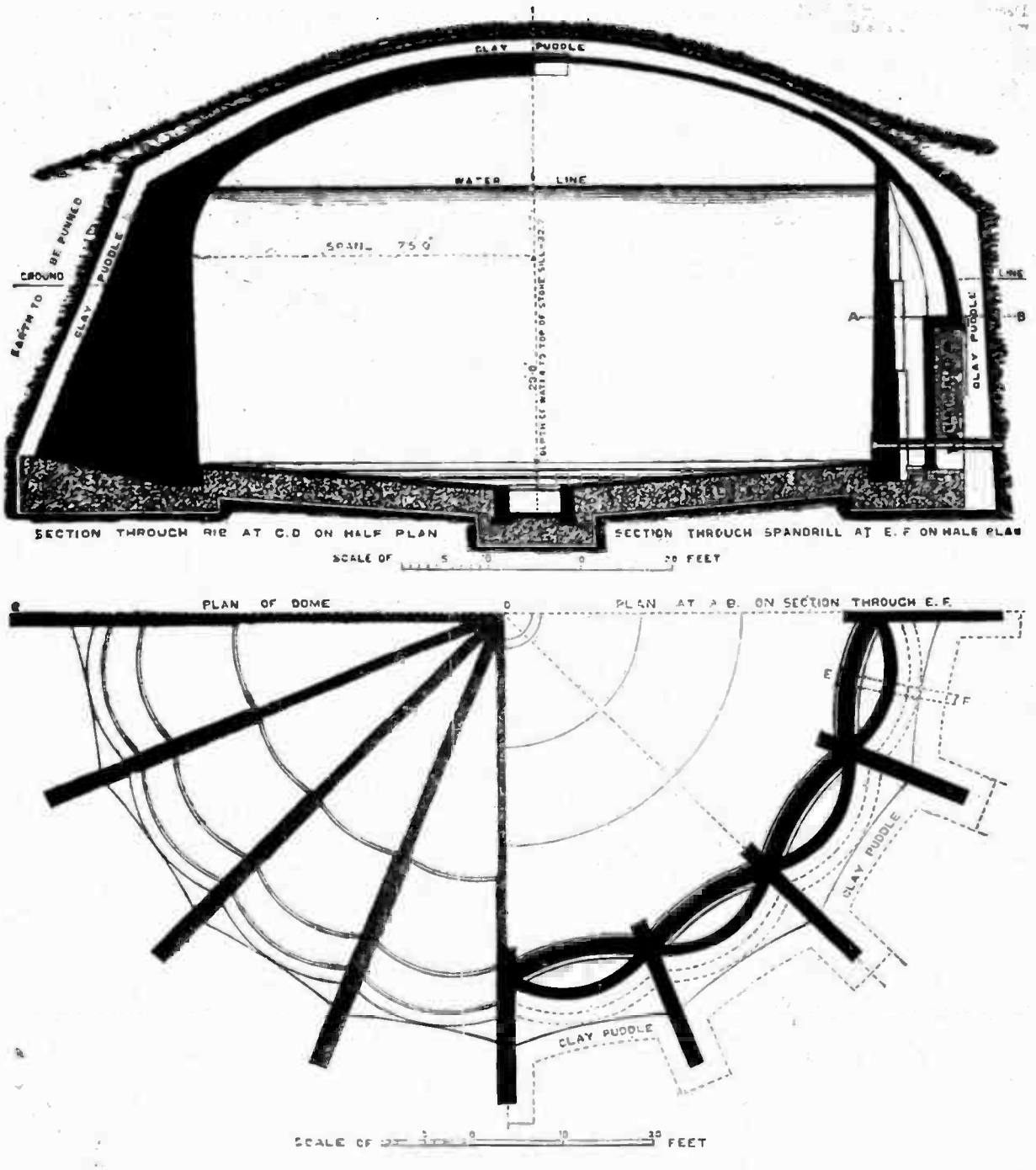
RESERVOIR, CROYDON WATER WORKS.

MR. RANGER, ENGINEER.



RESERVOIR, CROYDON WATERWORKS.

THE works for the supply of water to Croydon are the first that have been constructed under the Public Health Act. We have already alluded to them (page 795, vol. ix.), and now give a plan and section of the Reservoir just outside the town, which is not intended for storing, but simply to adjust the supply. This reservoir was constructed under the direction of Mr. Ranger: Mr. Harris was the builder. Our plan shows on one side the retaining walls, on the other the vault with which it is covered. The section is made to correspond. The inner segmental walls forming the sides are in cement, the outer in mortar. The whole is covered with earth, taking the shape of a large barrow; and there is a doorway on one side, above the water line. The diameter is 75 feet; the height to the springing 23 feet, and the rise of the arch 20 feet. The depth of water is 32 feet.

We are glad to find that the members of the local Board of Health here work very well together.

ON A MEANS OF PRESERVING FOR AN INDEFINITE PERIOD BUILDINGS CONSTRUCTED OF LIMESTONES.

The following paper was read at the Paris Academy of Sciences by M. Rochas:—On examining the chemical composition of various kinds of limestone, of which the greater number of our public edifices are constructed, it will be seen that the limestones which have best withstood the ravages of atmospheric influences, are those which contain the largest proportion of silica in combination; whilst those which are devoid of silica, or possess that substance simply in a state of mixture with the other ingredients of the limestone, have undergone a very considerable deterioration.

Observing these facts, I have endeavoured, and I believe successfully, to discover a method of remedying the evil which I have pointed out. It is to place the materials, which are susceptible of deterioration by the action of the air, in contact with silica, under such circumstances, that this latter substance may be made to combine with the base of the limestones, and thus transform them into a very hard, compact, and, to a certain extent, unalterable building material. In pursuing this investigation, I have made a considerable number of experiments, taking as a starting point the previous labours of M. Kulmann.

I have the honour of submitting to the notice of the Academy three specimens of limestone which have undergone the process of silicatization. For these I am indebted to the kindness of M. Violet le Duc, who carefully selected them for the purpose, from amongst some old materials taken from those

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